CLAIMS:

20

25

1. A 1,4-benzodioxanesulfonic acid compound represented by formula (1), a 1,4-benzodioxanesulfonic acid compound represented by formula (2), a 1,4-benzodioxanesulfonic acid compound having the repeating unit represented by formula (3), or a 1,4-benzodioxanesulfonic acid compound having the repeating unit represented by formula (4)

[where R¹ to R⁵ each independently denotes a hydrogen atom, an unsubstituted or substituted monovalent hydrocarbon group, or a halogen atom; X denotes a single bond, O, S, or NH; A¹ denotes a hydrogen atom, a halogen atom (if X denotes a single bond), S (if X denotes a single bond), S(O) group, S(O₂) group, any of N, Si, P, and P(O) group having an unsubstituted or substituted group binding thereto, an unsubstituted or substituted hydrocarbon group, 1,3,5-triazine group, or a substituted or unsubstituted group represented by formula (5) or (6)

(where W^1 and W^2 each independently denotes O, S, S(O) group, $S(O_2)$ group, or any of N, Si, P, and P(O) group having an unsubstituted or substituted group binding thereto); n^1 is an integer which equals the valence of A^1 and satisfies $1 \le n^1$; and m denotes the number of sulfonic acid groups binding to the benzene ring of the 1, 4-benzodioxane skeleton, with $1 \le m \le 4$.

(where R^1 to R^5 , X, and m are defined as above; A^2 denotes an unsubstituted or substituted divalent or higher multivalent hydrocarbon group, a divalent or trivalent 1,3,5-triazine group, or a substituted or unsubstituted group represented by the formula (5) or (6) above; Q^1 denotes a hydrogen atom, a halogen atom (if X denotes a single bond), S (if X denotes a single bond), S(O) group, S(O₂) group, any of N, Si, P, and P(O) group having an unsubstituted or substituted group binding thereto, an unsubstituted or substituted hydrocarbon group, 1,3,5-triazine group, or a substituted or unsubstituted group represented by the formula (5) or (6) above; n^2 is an integer which equals the number of valence of A^2 minus 1 and satisfies $1 \le n^2$; and z^1 is an integer which equals the number of valence of

5

10

15

20

$$\begin{array}{c|c}
 & A^3 & X \\
 & X \\
 & X \\
 & R^4 - C - R^5 \\
 & R^3 - O \\
 & R^2 - O \\
 & R^1 - O \\$$

(where R¹ to R⁵, X, and m are defined as above; A³ denotes an unsubstituted or substituted trivalent or higher multivalent hydrocarbon group, a trivalent 1,3,5-triazine group, or a substituted or unsubstituted group represented by the formula (5) or (6) above; A⁴ denotes an unsubstituted or substituted divalent or higher multivalent hydrocarbon group, a divalent

or trivalent 1,3,5-triazine group, or a substituted or unsubstituted group represented by the formula (5) or (6) above; n^3 is an integer which equals the number of valence of A^3 minus 2 and satisfies $1 \le n^3$; and p^1 is an integer which satisfies $1 \le p^1$ and p^2 is an integer which satisfies $0 \le p^2$, with $1 \le p^1 + p^2 \le 10000$.)

(where R^1 to R^5 , A^2 , X, m, and n^2 are defined as above; R^6 to R^8 each independently denotes a hydrogen atom, an unsubstituted or substituted monovalent hydrocarbon group, or a halogen atom; Q^2 denotes an unsubstituted or substituted divalent or higher multivalent hydrocarbon group, a divalent or trivalent 1,3,5-triazine group, or a substituted or unsubstituted group represented by the formula (5) or (6) above; Q^3 denotes an unsubstituted or substituted hydrocarbon group, a 1,3,5-triazine group, or a substituted or unsubstituted group represented by the formula (5) or (6) above; z^2 is an integer which equals the number of valence of Q^2 minus 1 and satisfies $1 \le z^2$; and q^1 is an integer which satisfies $1 \le q^1$ and q^2 is an integer which satisfies $0 \le q^2$, with $1 \le q^1 + q^2 \le 10000$.)

An electron acceptor substance composed of the
 1,4-benzodioxanesulfonic acid compound as defined in claim 1.

25

10

15

20

- A charge transporting varnish comprising the
 1,4-benzodioxanesulfonic acid compound as defined in claim 1,
 a charge transporting substance, and a solvent.
- 5 4. A charge transporting thin film comprising the 1,4-benzodioxanesulfonic acid compound as defined in claim 1 and a charge transporting substance.
- 5. An organic electroluminescence device having the charge transporting thin film as defined in claim 4.
 - 6. A process which comprises reacting(o-dihydroxybenzene)sulfonic acid represented by formula (7)

15 (where m denotes the number of sulfonic acid groups binding to the dihydroxybenzene ring, with $1 \le m \le 4$.) with an epihalohydrin compound represented by formula (8)

$$R^1 \xrightarrow{R^2 R^3 R^4} R^5$$
 (8)

(where R¹ to R⁵ each independently denotes a hydrogen atom,
an unsubstituted or substituted monovalent hydrocarbon group,
or a halogen atom; and Y denotes a halogen atom.)
in the presence of a catalyst, thereby producing a
1,4-benzodioxanesulfonic acid compound represented by formula
(9).

$$\begin{array}{c|c}
R^1 & R^2 & R^3 & R^4 \\
O & O & R^5
\end{array}$$

$$\begin{array}{c}
(9) \\
(SO_3H)_m
\end{array}$$

25

(where R¹ to R⁵ and m are defined as above.)